Discussion on "Consideration of 2K Operation" by Tsuyoshi Tajima

A comparison for 2K and 4K operation has been done for two cases: 10 nΩ and 1 nΩ residual resistance. Delayen pointed out that the 1 nΩ case corresponds to only 2 mG external magnetic field, which is achievable in a vertical test, but is difficult to achieve in a real accelerator tunnel.
The frequency dependency of losses favors spokes at 500 or 600 MHz. This is however not an option for AAA, as the frequency combination 350/700 MHz is set by the RFQ.
Pagani summarized that the achieved residual resistance, the static losses and microphonics issues are the real drivers of a 2K/4K decision. Kelley had shown, that important components (e.g. cryostat) are not affected a lot, the cost between the two options seems to be comparable. 2K is paying more for the cryoplant, 4K pays more in losses. Delayen added that the microphonics issue is mostly dominated by the beamloading for an operation scenario.